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I CLAIM:

1 1. A drill chuck comprising:

2 a chuck body extending along and rotatable about an
3 axis and formed with an axially forwardly open tool seat and with
4 a plurality of angled guides opening axially forward into the
5 seat;

6 respective jaws in the guides having toothed outer
7 edges;

8 an inner sleeve having a screwthread threadedly
9 engaging the jaw outer edges, axially shiftable on the body, and
10 rotatable about the axis to axially displace the jaws; and
11 mechanism engaged between the inner sleeve and the
12 chuck body for axially displacing the inner sleeve relative to
13 the body and thereby axially displacing the jaws.

1 2. The drill chuck defined in claim 1, further
2 comprising

3 an outer sleeve surrounding the inner sleeve, the
4 mechanism being actuated by the outer sleeve; and
5 a limited-slip coupling between the inner sleeve and
6 the outer sleeve.

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1 3. The drill chuck defined in claim 2 wherein the
2 mechanism includes another screwthread between the outer sleeve
3 and the chuck body.

1 4. The drill chuck defined in claim 3 wherein the
2 inner-sleeve screwthread is of steeper pitch than the outer-
3 sleeve screwthread.

1 5. The drill chuck defined in claim 4 wherein the
2 outer sleeve is provided with a ring formed with the outer-sleeve
3 screwthread, rotationally coupled to the outer sleeve, and
4 bearing axially forward on the inner sleeve.

1 6. The drill chuck defined in claim 5, further
2 comprising
3 a roller bearing between the outer-sleeve ring and a
4 rear end of the inner sleeve.

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1 7. The drill chuck defined in claim 4, further
2 comprising

3 angularly engageable inner and outer abutments on the
4 inner and outer sleeves limiting relative rotation to less than
5 360°.

1 8. The drill chuck defined in claim 4 wherein the
2 outer-sleeve ring has an axially elongated inner collar formed
3 with the outer-sleeve screwthread.

1 9. The drill chuck defined in claim 4 wherein the
2 outer-sleeve ring is formed with axially throughgoing chip-
3 passing holes.

1 10. The drill chuck defined in claim 4 wherein each of
2 the sleeves has a substantially cylindrical rear-end portion, a
3 substantially cylindrical front-end portion of smaller diameter
4 than the respective rear-end portion, and a substantially
5 frustconical intermediate portion joining the respective front-
6 end and rear-end portions, the intermediate portions being
7 axially level with each other and fitting complementarily within
8 each other.

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1 11. The drill chuck defined in claim 4, further
2 comprising

3 a spring element coupled angularly to one of the
4 sleeves and couplable angularly to the other of the sleeves.

1 12. The drill chuck defined in claim 11 wherein the
2 other sleeve is formed with a radially open pocket and the spring
3 element is formed with a radially projecting bump engageable in
4 the pocket.

1 13. The drill chuck defined in claim 12 wherein the
2 chuck body is formed with an annular row of radially projecting
3 teeth, the spring element having a tip engageable in the teeth
4 when the bump is disengaged from the pocket.

1 14. The drill chuck defined in claim 13 wherein the
2 outer sleeve is made of metal and is provided with a plastic cam
3 ring forming the pocket.

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1 15. The drill chuck defined in claim 13 wherein the
2 teeth have an axial length substantially longer than an angular
3 length of the spring-element tip, whereby the spring-element tip
4 can move axially while remaining engaged with the teeth.

1 16. The drill chuck defined in claim 13 wherein the
2 chuck-body teeth are sawteeth so that the tip can slide in one
3 angular direction on them and is blocked against sliding in the
4 opposite direction on them.

1 17. The drill chuck defined in claim 4, further
2 comprising
3 a shield cap engaged over a front end of the outer
4 sleeve and rotatable about the axis.

1 18. The drill chuck defined in claim 17 wherein the
2 cap is rotatably mounted on the outer sleeve.

1 19. The drill chuck defined in claim 17 wherein the
2 cap is rotatably mounted on the chuck body.

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1 20. The drill chuck defined in claim 4, further

2 comprising

3 a ring formed with axially forwardly open pockets

4 aligned with the guides and engaged between the mechanism and a

5 rear end of the inner sleeve.